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ABSTRACT

Recent research has suggested that children acquire important knowledge and attitudes about drugs early in their development. To explore the extent of preschoolers' knowledge of alcoholic beverages, two studies were conducted. In the first study, 20 children, 10 from families with alcoholic fathers and 10 controls, participated in Piagetian-like tasks to determine their cognitions about alcohol and its uses. Preliminary findings from this pilot study indicated that most of the study children possessed considerable knowledge about alcoholic beverages. In addition, children in alcoholic families did not perform significantly better on these tasks, although differences were in the predicted direction. In the second study, 131 preschool children performed the same tasks. Results from this study parallelled the initial findings. Most of these children already possessed considerable knowledge about the appropriate users of alcoholic beverages. These data showed that alcoholic beverages were selected for adults as their beverage of choice far more often than they were selected for children, and that alcoholic beverages were selected more often for adult males than for adult females. Further analyses of these data, based upon the chronological age of the preschool child who was completing the appropriate beverage task, showed that even the youngest children in the sample selected alcoholic beverages far more frequently for adults than for children, and performance on this task showed minimal age effects. These findings suggest learning about alcoholic beverages begins early in a child's life, and educational programs could appropriately begin with kindergarten. (Author/BL)

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Cognitive Factors in Substance Abuse: The Case for Early Learning

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COGNITIVE FACTORS IN SUBSTANCE ABUSE: THE CASE FOR EARLY LEARNING

ABSTRACT

Little is known concerning early learning about drugs and their uses. Current prevention efforts focus upon the adolescent's personal experiences and peer group influences as significant sources of knowledge about drugs. Recent evidence on children's knowledge of alcoholic beverages suggests that attitudes and knowledge about specific drugs develop much earlier than adolescence. Two studies were conducted to determine whether preschool children have knowledge of alcoholic beverages and their uses. Study 1 compared alcohol related cognitions of preschool children who live in alcoholic families, to those of same aged community control peers. Preliminary findings from this pilot study indicated that most of these children (alcoholic and control) possessed considerable knowledge about alcoholic beverages. In addition, children in alcoholic families did not perform significantly better on these tasks, although differences were in the predicted direction. Study 2 was done to replicate our preliminary findings on children's knowledge of alcoholic beverages, using a larger normative sample. Results from this study parallelled our initial findings; most of these children already possessed considerable knowledge about the appropriate users of alcoholic beverages. Discussion focuses on needed revisions in current prevention programs and theories of substance abuse development.

INTRODUCTION

Substance abuse and its related problems of adulthood are currently considered to be one of the most serious health related problems in the United States. There is significant evidence that attitudes about drugs in adolescence are intimately linked with actual use and abuse. and are predictors of onset as well as extent of involvement in the future. Modern prevention and educational efforts focus upon the individual adolescent's peer group as the major source of this knowledge and these attitudes.

Data collected with cross-sectional methods (Jahoda & Cramond, 1972; Spiegler, 1983) as well as limited longitudinal evidence (Aitken, 1978), strongly suggests that children acquire important knowledge and attitudes much earlier, possibly in the child's family of origin, and that adolescent peer group influences may be of lesser importance than previously supposed. Since some evidence shows that the individual's attitudes and expectancies about future drug involvement are even more important than general personality factors, this early learning about drugs may be of critical importance. While a few prior longitudinal studies of adult substance abusers have been conducted, none begins before age 10 and none have collected data on drug specific attitudes or knowledge that may specifically predict future problems. Most of the previous work in this area has ignored substance specific aspects of the disorder and has utilized global adjustment models when attempting to build predictive models for later outcomes.

Two studies were conducted to explore the extent of preschooler's knowledge of alcoholic beverages. Study 1 was a pilot study that evaluated children's cognitions about alcoholic beverages in two carefully matched groups of preschool children and their families. The first group of families (N = 10) has alcoholic fathers/husbands, and the comparison group (N = 10) has no paternal alcohol problems. Since male children of alcoholic fathers are at high risk to become alcoholics as adults, they comprise a group that is higher in eventual substance abuse potential as compared to control children. For this study we used two measures, a smelling task developed to determine children's ability to recognize alcoholic beverages by smell, and an appropriate beverages task that evaluates children's knowledge of appropriate users of alcoholic beverages. We were first attempting to determine whether any of these young children possessed knowledge of alcoholic beverages and its uses; and secondly, whether the high risk children had special cognitions about alcoholic beverages.

Study 2 used the appropriate beverages task to determine whether initial pilot findings could be replicated with a larger normative sample (N = 131). The purpose of this work was to determine whether encouraging preliminary findings from our pilot study were truly indicative of the extent of children's early knowledge of appropriate users of alcoholic beverages.

METHOD-Study 1

Our cohort of experimental children (ages 2 1/2 to 6 years) is being obtained by locating fathers recently arrested for drunk driving with intact families and high blood alcohol levels. A definitive diagnosis of paternal alcoholism according to Research Diagnosic Criteria (Feighner, Robins, Guze, Woodruff, Winokur, & Munoz, 1972) is made subsequent to our initial recruitment using multiple questionnaires, interviews, and available legal documents. Control families are recruited from the same census tract by going door to door within the neighborhood until another family is located with a child the same age and birth position, as well as the same number of siblings. This careful recruitment scheme has enabled us to match families on a number of child related variables of interest, as well as familial variables of social prestige, religion, and age of parents (Noll, 1983). Control families are screened for paternal alcoholism. All alcoholic families and 90% of control families contacted have agreed to participate (total N thus far is 24 families). Children's knowledge about alcoholic beverages and drinking are assessed during the sixth of our 8 data collection sessions with the family. The assessment occurs in the project's mobile van-laboratory and utilizes 3 Piagetian like tasks to determine the child's cognitions about alcoholic beverages and its users. Task 1 is a smelling game developed to determine children's ability to recognize alcoholic beverages by smell. Task 2 is an appropriate beverage task where children are shown 11 drawings of adults and children in numerous settings and asked what the characters in the drawings would like to drink from an array of 10 photographs (5 alcoholic and 5 non-alcoholic). Task 3 is an object sort where the child is given several object sorts to complete, including 1 with various alcoholic and non-alcoholic beverages. This last task assesses the child's grasp of the concept of "alcoholic beverages" as a specific sub-set of things to drink. During the course of these experimental procedures children are asked a series of questions about their experiences already with alcohol as well as their future drinking plans.

RESULTS-Study 1

All children performed remarkably well on the smelling task and the appropriate beverage task (see Table 1). They selected alcoholic beverages as adult's beverage of choice far more often than they selected alcoholic beverages as the beverage of choice for children. They also selected alcoholic beverages for men to drink more often than they selected alcoholic beverages for women to consume. The children in families with paternal alcoholism did not perform differently on these tasks than did the control children.

METHOD-Study 2

Several local day care centers were contacted to obtain permission to use our appropriate beverage task with children enrolled in their day care between the ages of 30 and 72 months. Children were evaluated individually in the day care center by a graduate student in clinical child psychology. A total of 131 children were tested during this phase of our research.

RESULTS-Study 2

Data collected from a larger normative cohort of preschool children replicated pilot findings from Study 1. These data (Figure 1) showed that alcoholic beverages were selected for adults as their beverage of choice far more often than they were selected for children ($p < .001$) and that alcoholic beverages were selected more often for adult males than for adult females ($p < .001$). Further analyses of these data based upon the chronological age of the preschool child who was completing the appropriate beverage task (Figure 2) showed that even the youngest children in our sample selected alcoholic beverages far more frequently for adults than for children ($p < .001$), and performance on this task showed minimal age effects.

DISCUSSION

The data reported in this paper strongly suggest that learning about alcoholic beverages begins very early in a child's life. Our initial findings on a small pilot cohort of preschoolers from our vulnerability study (Zucker, Baxter, Noll, Theado, & Weil, 1982) were replicated with a larger normative sample of children. Most remarkably, although we anticipated that the youngest children in our sample would not demonstrate knowledge about appropriate users of alcoholic beverages, they performed nearly as well as the older children. These data show that children are acquiring knowledge about alcohol and its uses very early in life; this process of knowledge acquisition appears to begin even before a child is 3 years old. Contrary to our expectations, children with alcoholic fathers did not perform better on these tasks, although the differences between children of alcoholics and control children were in the predicted direction.

These data show that learning about drinking begins to occur "naturally" even before a child enters kindergarten and suggests that education programs about alcohol and its uses could appropriately begin with kindergarten (or before!). Programs could be developed to match the child's emerging cognitive abilities and would hopefully be received better when presented as children naturally learn about

alcohol, rather than waiting until children are older and have already gained considerable knowledge about the use of alcohol and other drugs. The tasks developed for this research project demonstrate the types of materials that can be used and understood by preschool children.

Although we anticipated that the children of alcoholics would demonstrate different cognitions about alcohol on these tasks, and an earlier preliminary analysis showed significant differences, the data at this time do not show differences in cognitions about alcohol between children of alcoholics and controls. Work is currently underway to expand the size of our sample of high risk and control children, as well as to complete further analyses of these data.

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Table 1. Study 1 - Basic findings.

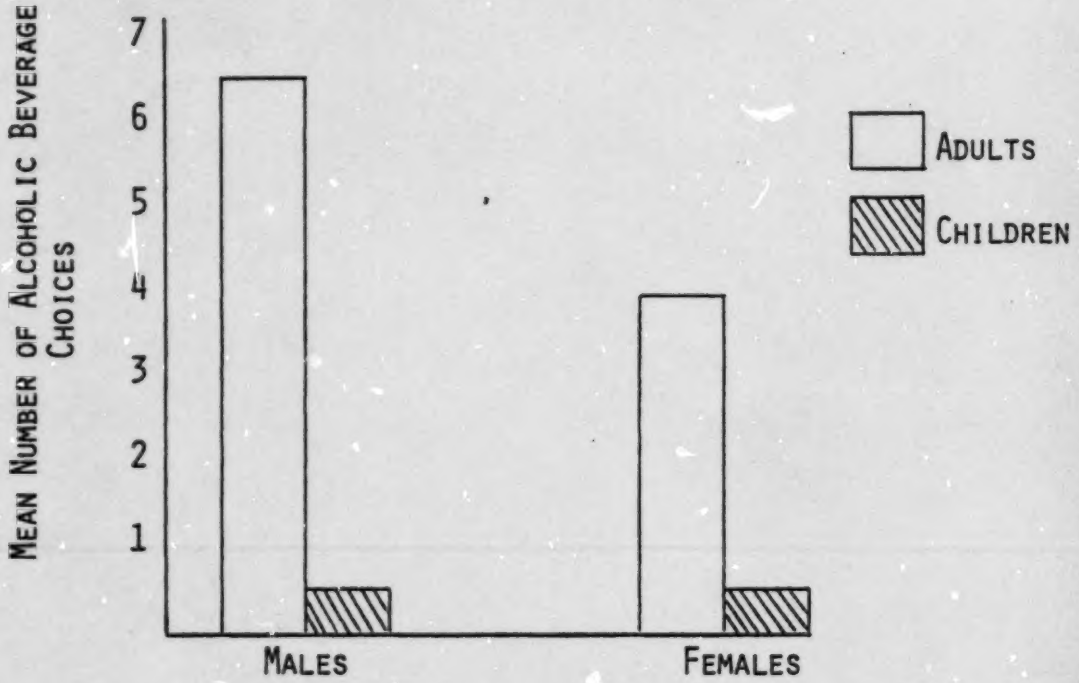
1. CHILDREN SELECTED ALCOHOLIC BEVERAGES MORE OFTEN FOR DRAWINGS OF ADULTS THAN THEY DID FOR DRAWINGS OF CHILDREN ($p < .001$).

2. CHILDREN SELECTED ALCOHOLIC BEVERAGES MORE OFTEN FOR PICTURES OF MEN THAN WOMEN ($p < .001$).

3. CHILDREN WITH ALCOHOLIC FATHERS WERE SLIGHTLY BETTER AT IDENTIFYING ALCOHOLIC BEVERAGES BY SMELL THAN CONTROLS (n.s.).

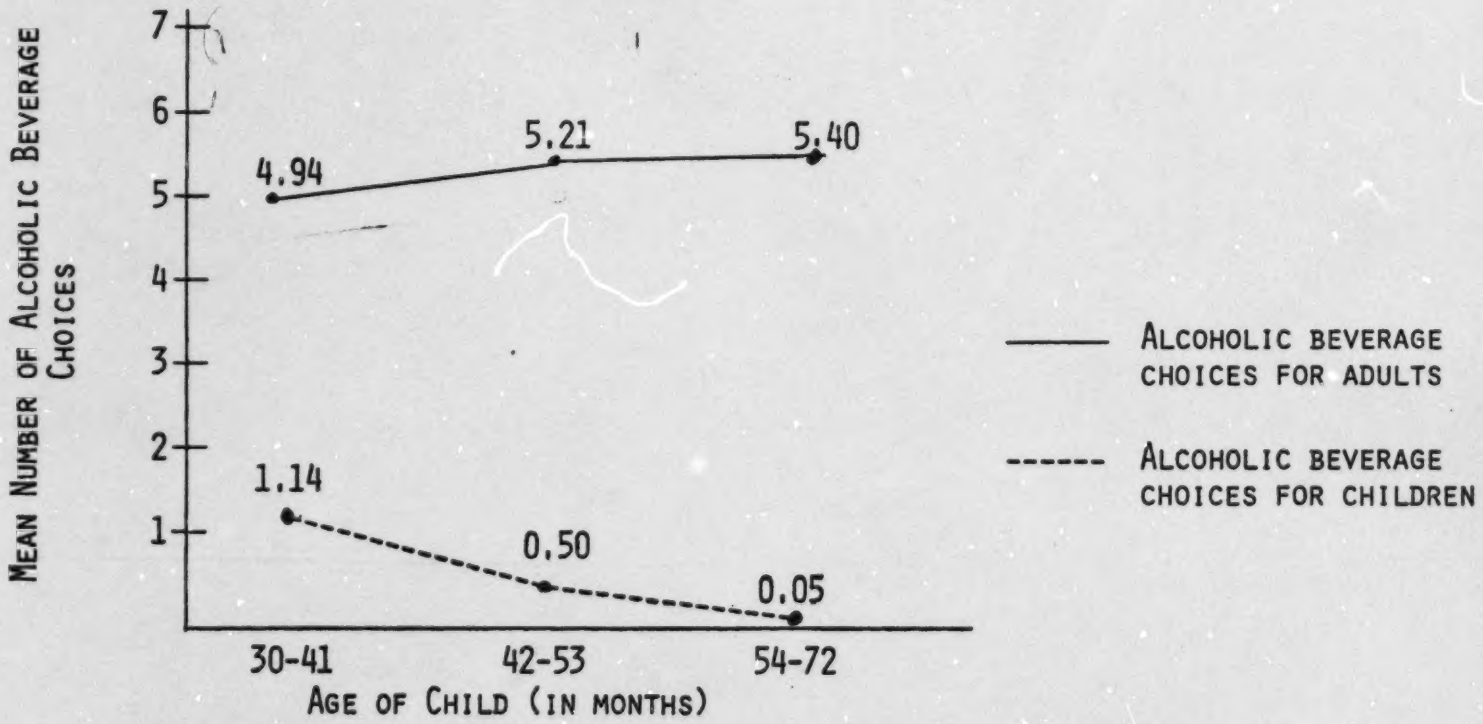
4. CHILDREN WITH ALCOHOLIC FATHERS SELECTED ALCOHOLIC BEVERAGES AS ADULTS' BEVERAGE OF CHOICE SLIGHTLY MORE OFTEN THAN CONTROLS (n.s.).

FIGURE 1. MEAN NUMBER[1] OF ALCOHOLIC BEVERAGE CHOICES MADE BY PRESCHOOLERS AS RELATED TO SEX AND AGE OF STIMULUS FIGURE (N=131).



NOTE. [1]REPORTED MEANS ARE WEIGHTED SCORES BASED UPON CHOICES WITH 10 STIMULI.

FIGURE 2. MEAN NUMBER[1] OF ALCOHOLIC BEVERAGE CHOICES MADE BY PRESCHOOLERS AS RELATED TO THEIR OWN AGE AND AGE OF STIMULUS FIGURE (N=131).



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